F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD			

INTERSECTION OPERATION

The intersection of MD 158 (peninsula Expressway) at Ramp D will operate in a NEMA five-phase semi-traffic-actuated mode. Eastbound and westbound MD 158 movements will operate concurrently with exclusive/permissive left turns. The Bethlehem Steel Entrance will operate alone.

Eight phase (fully-actuated) traffic signal controller and system ready base-mounted cabinet, and two (5) four-channel loop detector amplifiers will be installed at this intersection.

CONSTRUCTION DETAILS

A. Install 27' steel pole with 38' mast arm with traffic signal heads, 20' lighting arm and luminaire, and signs as shown (NOTE: 2-3" PVC 90 degree angle conduit bends).

B. Install 27' steel pole with twin 42' and 46' mast arms with traffic signal heads and sign, 20' lighting arm and luminaire and sign as shown (NOTE: 2-3" PVC 90 degree angle conduit bends).

C. Install traffic signal controller with control and distribution equipment (see drawing B-2) and five (5) two-channel loop detector amplifiers in base-mounted, system-ready cabinet.(NOTE: 1-2" PVC 90 degree angle (schedule 80) conduit bend and 2-4" PVC 90 degree angle conduit bends).

D. Install handhole.

E. Install 1" electrical conduit detector wire sleeve.

F. Install 2" schedule 40 electrical conduit-trenched/buried.

G. Install 2" schedule 80 electrical conduit-trenched/buried.

H. Install 3" schedule 40 electrical conduit-trenched/buried.

I. Install 3" schedule 80 electrical conduit-trenched/buried.

J. Install 4" schedule 80 electrical conduit-trenched/buried.

K. Install 2-4" schedule 40 electrical conduit-trenched/buried.

L. Install 6'x 6' advance loop detector (3-turns).

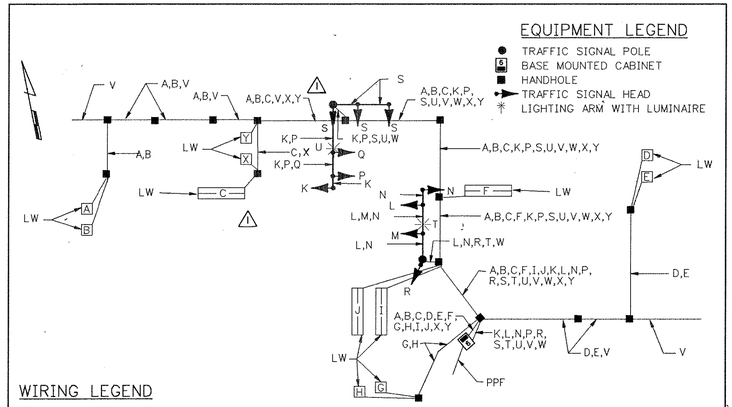
M. Install 6' x 6' sampling station loop detector (3-turns)

N. Install 6'x 30' loop detector, quadrupole type (2-4-2 turns).

O. Install 24" solid white stop line.

GENERAL NOTES

1. Geometrics shall be confirmed prior to the installation of signal equipment.
2. ⚠1 Loop detectors and conduits shall be installed prior to the installation of pavement markings.
3. All utilities are shown in their approximate location and are not to be considered as complete. The Contractor shall be responsible for contacting Miss Utility to verify the location of all utilities. The Contractor shall contact The project Engineer prior to construction if there may be potential conflicts.
4. Pavement markings detailed are proposed and are to be installed by the Contractor in accordance with S.H.A. standards. All other pavement markings will be installed as part of the highway contract.
5. All luminairs have to be full cut off.
6. "D.O." indicates delay output loop detector.

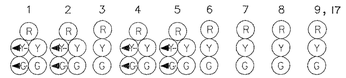


WIRING LEGEND

LW	LOOP WIRE
A-J,X,Y	2-CONDUCTOR CABLE (ALUMINUM SHIELDED)
K,L,N,P,R,S	7-CONDUCTOR CABLE (NO. 14 A.W.G.)
M,Q	5-CONDUCTOR CABLE (NO. 14 A.W.G.)
T,U	2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
V	12 PAIR TELEMETRY CABLE (NO. 19 A.W.G.)
W	GROUND WIRE (NO. 6 A.W.G.)
PPF	PROPOSED POWER FEED

⚠1

WIRING DIAGRAM



	1	2	3	4	5	6	7	8	9, 17	
PHASE 1•5	R G	R G	R	R G	R G	R	R	R	R	↙
1•5 CHANGE	R Y	R Y	R	R Y	R Y	R	R	R	R	↙
PHASE 1•6	R G	R G	G	R	R	R	R	R	R	↙
1•6 CHANGE	G Y	G Y	G	R	R	R	R	R	R	→
PHASE 2•5	R	R	R	G	G	G	R	R	R	←
2•5 CHANGE	R	R	R	R Y	R Y	G	R	R	R	↙
PHASE 2•6	G	G	G	G	G	G	R	R	R	←
2•6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	→
PHASE 4	R	R	R	R	R	R	G	G	G	↑
4 CHANGE	R	R	R	R	R	R	Y	Y	Y	↑
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	↔ ↕

PHASE SEQUENCE CHART

SS-08

RUMMEL, KLEPPER & KAHL
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BALTIMORE, MD 21217
TEL. (410) 728-2900

REVISIONS:	APPROVALS:
⚠1 ADDENDUM NO.1 4-24-95	
	CHIEF SIGNAL DESIGN SECTION
	ASST. DISTRICT ENGINEER TRAFFIC
	CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR OFFICE OF TRAFFIC & SAFETY

MDOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION LOG MILE *030158

DRAWN BY: ZAJ
DES. BY: ZAJ
CHK. BY: Steve Ray 3/23/95

MD 158 (BETHLEHEM BOULEVARD)
@ RAMP D
GENERAL INFORMATION
COUNTY: BALTIMORE

DATE: MARCH, 1995 F.A.P. NO.
SCALE: 1"=20' S.H.A. NO. KB-421-000-006

TS/STD. NO.: TS-3503GI-1

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